Interview Summary	Application No.	Applicant(s)	
	10/657,703	PEBAY ET AL.	
	Examiner	Art Unit	
	Daniel C. Gamett, PhD	1647	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Daniel C. Gamett, PhD*. (3)_____.

(2) *Stephen weyer*. (4)_____.

Date of Interview: *23 May 2007*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: *1-126*.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☒ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *Cancellation of all withdrawn claims. Cancellation of claims 71, and 115 for failure to further limit a base claim. Amendment of claims 63 and 65 for clarity, and of remaining claims to correct dependency and remove duplicates.*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

_____
Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

ATTACHMENT B
Amendments to the Claims

Please cancel claims 11 and 14 without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for inhibiting differentiation of ~~a human~~ an embryonic stem cell, which method comprises providing an embryonic stem cell, incubating the embryonic stem cell in the presence of an agonist of a LPL receptor, the agonist selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC.

2. (Withdrawn) A method for modulating spontaneous differentiation of a stem cell, which method comprises incubating the stem cell in the presence of a ligand of a class III tyrosine kinase receptor.

3. (Currently Amended) A method for ~~modulating~~ inhibiting differentiation of ~~a human~~ an embryonic stem cell, which method comprises providing an embryonic stem cell, incubating the embryonic stem cell in the presence of an agonist of a LPL receptor and a ligand of a class III tyrosine kinase receptor, the agonist selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC, and the ligand is a PDGF.

4. (Canceled)

5. (Previously Presented) A method according to claim 1 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2, and S1P3.

6-7. (Canceled)

8. (Previously Presented) A method according to claim 1 wherein the agonist is S1P.

9. (Previously Presented) A method according to claim 1 wherein the agonist is dihydro S1P.

10. (Previously Presented) A method according to claim 3 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

11. (Canceled)

12. (Currently Amended) A method according to claim ~~11~~ 1 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

13. (Previously Presented) A method according to claim 1 wherein the stem cell is co-incubated with an agent selected from the group consisting of TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, a serum and a phorbol ester.

14. (Canceled)

15. (Currently Amended) A method according to claim ~~14~~ 1 wherein the stem cell is an ES cell.

16. (Currently Amended) A method according to claim ~~14~~ 1 wherein the embryonic stem cell is a ~~hES~~ human embryonic stem cell.

17. (Withdrawn) A serum free or substantially serum free medium useful for modulating spontaneous differentiation of a stem cell, comprising an agonist of a LPL receptor.

18. (Withdrawn) A serum free or substantially serum free medium useful for modulating spontaneous differentiation of a stem cell, comprising a ligand of a class III tyrosine kinase receptor.

19. (Withdrawn) A serum free or substantially serum free medium useful for modulating spontaneous differentiation of a stem cell, comprising an agonist of a LPL receptor and a ligand of a class III tyrosine kinase receptor.

20. (Withdrawn) A medium according to claim 17 wherein the modulation is inhibition of differentiation.

21. (Withdrawn) A medium according to claim 17 wherein the medium is serum free.

22. (Withdrawn) A medium according to claim 17 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2, and S1P3.

23. (Withdrawn) A medium according to claim 17 wherein the agonist is a phospholipid.

24. (Withdrawn) A medium according to claim 23 wherein the agonist is selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC.

25. (Withdrawn) A medium according to claim 24 wherein the agonist is S1P or functional equivalent thereof.

26. (Withdrawn) A medium according to claim 24 wherein the agonist is dihydro S1P or functional equivalent thereof.

27. (Withdrawn) A medium according to claim 18 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

28. (Withdrawn) A medium according to claim 18 wherein the ligand is a PDGF or functional equivalent thereof.

29. (Withdrawn) A medium according to claim 28 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

30. (Withdrawn) A medium according to claim 19 comprising TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, or a serum or phorbol ester.

31. (Withdrawn) A medium according to claim 19 wherein the stem cell is derived from foetal tissue or adult tissue.

32. (Withdrawn) A medium according to claim 31 wherein the stem cell is an ES cell.

33. (Withdrawn) A medium according to claim 31 wherein the stem cell is a hES cell.

34. (Withdrawn) A medium according to claim 17 wherein the base medium is a standard serum free medium.

35. (Withdrawn) A medium according to claim 17 comprising 25mM Hepes.

36. (Withdrawn) A medium according to claim 34 wherein the base medium is based on DMEM supplemented with insulin, transferrin and selenium.

37. (Withdrawn) A medium according to claim 17 or wherein the agonist is S1P and is present in the medium at a concentration of from 0.1 μM to 10μM.

38. (Withdrawn) A medium according to claim 17 wherein the agonist is present in the medium at a concentration of about 10μM.

39. (Withdrawn) A medium according to claim 18 wherein the ligand is present in the medium at a concentration of from 1 ng/ml to 20ng/ml where the ligand is either PDGFaa, PDGFab or PDGFbb.

40. (Withdrawn) A medium according to claim 18 wherein the ligand is present in the medium at a concentration of 20 ng/ml.

41. (Currently Amended) A method for propagating ~~a human~~ an embryonic stem cell~~,~~ in an undifferentiated state ~~comprising~~, which method comprises providing an embryonic stem cell, incubating the embryonic stem cell in the presence of ~~exposing the stem cell to~~ an agonist of a LPL receptor, the agonist selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC.

42. (Withdrawn) A stem cell grown and/or maintained in a cell culture medium according to claim 17.

43. (Withdrawn) A stem cell derived from the stem cell according to claim 42.

44. (Withdrawn) A stem cell that is at least partially differentiated derived from the stem cell according to claim 43.

45. (Withdrawn) A method of treating or preventing a disorder of stem cell differentiation comprising administering to an animal in need thereof a composition containing an agonist of a LPL receptor.

46. (Withdrawn) A method of treating or preventing a disorder of stem cell differentiation comprising administering to an animal in need thereof a composition containing a ligand of a class III tyrosine kinase receptor.

47. (Withdrawn) A method of treating or preventing a disorder of stem cell differentiation comprising administering to an animal in need thereof a composition containing an agonist of a LPL receptor and a ligand of a class III tyrosine kinase receptor.

48. (Withdrawn) A method according to claim 45 wherein the modulation is inhibition of differentiation.

49. (Withdrawn) A method according to claim 45 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2, and S1P3.

50. (Withdrawn) A method according to claim 45 wherein the agonist is a phospholipid.

51. (Withdrawn) A method according to claim 45 wherein the agonist is selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC.

52. (Withdrawn) A method according to claim 51 wherein the agonist is S1P or functional equivalent thereof.

53. (Withdrawn) A method according to claim 51 wherein the agonist is dihydro-S1P or functional equivalent thereof.

54. (Withdrawn) A method according to claim 46 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

55. (Withdrawn) A method according to claim 46 wherein the ligand is a PDGF or functional equivalent thereof.

56. (Withdrawn) A method according to claim 55 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

57. (Withdrawn) A method according to claim 45 comprising use of TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, or a serum or phorbol ester.

58. (Withdrawn) A method according to claim 45 wherein the stem cell is derived from foetal tissue or adult tissue.

59. (Withdrawn) A method according to claim 58 wherein the stem cell is an ES cell.

60. (Withdrawn) A method according to claim 58 wherein the stem cell is a hES cell.

61. (Withdrawn) A pharmaceutical composition comprising a class III tyrosine kinase receptor ligand and/or a LPL receptor agonist.

62. (Withdrawn) A pharmaceutical composition according to claim 61 comprising TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, or a serum or phorbol ester.

63. (Currently Amended) A method of producing a population of proliferating undifferentiated ~~human~~ embryonic stem cells from a stem cell, which method comprises providing an embryonic stem cell, incubating the embryonic stem cell in the presence of an agonist of a LPL receptor, the agonist selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC.

64. (Withdrawn) A method of producing a population of proliferating undifferentiated stem cells from a stem cell which method comprises incubating the stem cell in the presence of a ligand of a class III tyrosine kinase receptor.

65. (Currently Amended) A method of producing a population of proliferating undifferentiated ~~human~~ embryonic stem cells from a stem cell, which method comprises providing an embryonic stem cell, incubating the embryonic stem cell in the presence of an agonist of a LPL receptor and a ligand of a class III tyrosine kinase receptor, the agonist selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC, and the ligand is a PDGF.

66. (Original) A method according to claim 63 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2 and S1P3.

67-68. (Canceled)

69. (Previously Presented) A method according to claim 63 wherein the agonist is S1P.

70. (Previously Presented) A method according to claim 63 wherein the agonist is dihydro S1P.

71. (Previously Presented) A method according to claim 65 wherein the ligand is a PDGF.

72. (Previously Presented) A method according to claim 65 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

73. (Original) A method according to claim 71 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

74. (Withdrawn) A method according to claim 64 comprising use of TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, a serum or phorbol ester.

75. (Withdrawn) A method according to claim 64 wherein the stem cell is derived from foetal tissue or adult tissue.

76. (Withdrawn) A method according to claim 75 wherein the stem cell is an ES cell.

77. (Withdrawn) A method according to claim 75 wherein the stem cell is a hES cell.

78. (Withdrawn) A population of undifferentiated stem cells produced by at least one of the methods according to claim 63 or using a substantially serum free medium useful for modulating spontaneious differentiation of a stem cell, comprising an agonist of LPL receptor.

79. (Canceled)

80. (Withdrawn) Use of a ligand of a class III tyrosine kinase receptor in modulating spontaneous differentiation of a stem cell.

81-86. (Canceled)

87. (Withdrawn) Use according to claim 80 wherein the ligand is a PDGF or functional equivalent thereof.

88. (Withdrawn) Use according to claim 80 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

89. (Withdrawn) Use according to claim 87 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

90-93. (Canceled)

94. (Withdrawn) Use of a ligand of a class III tyrosine kinase receptor in producing a population of proliferating undifferentiated stem cells from a stem cell.

95. (Canceled)

96. (Withdrawn) Use of a composition containing an agonist of a LPL receptor in a method of treating or preventing a disorder of stem cell differentiation.

97. (Withdrawn) Use of a composition containing a ligand of a class III tyrosine kinase receptor in a method of treating or preventing a disorder of stem cell differentiation.

98. (Withdrawn) Use of a composition containing a ligand of a class III tyrosine kinase receptor in a method of treating or preventing a disorder of stem cell differentiation.

99. (Withdrawn) A method of identifying a compound capable of modulating spontaneous differentiation of a stem cell, which method comprises

exposing a LPL receptor to a test compound; and

determining binding of the test compound to the LPL receptor.

100. (Withdrawn) A method of identifying a compound capable of modulating spontaneous differentiation of a stem cell, which method comprises

exposing a ligand of a class III tyrosine kinase receptor to a test compound; and

determining binding of the test compound to the tyrosine kinase receptor.

101. (Withdrawn) A method according to claim 99 wherein the modulation is inhibition of differentiation

102. (Withdrawn) A method according to claim 99 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2, S1P3.

103. (Withdrawn) A method according to claim 100 wherein the tyrosine kinase receptor is a PDGF receptor.

104. (Withdrawn) A method according to claim 103 wherein the PDGF receptor is PDGFR-α or PDGFR-β.

105. (Withdrawn) A method according to claim 103 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

106. (Withdrawn) A method according to claim 99 wherein the stem cell is derived from foetal tissue or adult tissue.

107. (Withdrawn) A method according to claim 106 wherein the stem cell is an ES cell.

108. (Withdrawn) A method according to claim 106 wherein the stem cell is a hES cell.

109. (Previously Presented) The method of claim 41, wherein the stem cell is a hES cell.

110. (New) A method for propagating an embryonic stem cell in an undifferentiated state, which method comprises providing an embryonic stem cell, incubating the embryonic stem cell in the presence of an agonist of a LPL receptor and a ligand of a class III tyrosine kinase receptor, the agonist selected from the group consisting of S1P, dihydro S1P, LPA, PAF and SPC, and the ligand is a PDGF.

111. (New) A method according to claim 41 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2, and S1P3.

112. (New) A method according to claim 41 wherein the agonist is S1P.

113. (New) A method according to claim 41 wherein the agonist is dihydro S1P.

114. (New) A method according to claim 110 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

115. (New) A method according to claim 110 wherein the ligand is a PDGF.

116. (New) A method according to claim 115 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

117. (New) A method according to claim 41 wherein the stem cell is co-incubated with an agent selected from the group consisting of TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, a serum and a phorbol ester.

118. (New) A method according to claim 41 wherein the stem cell is a hES cell.

119. (New) A method according to claim 63 wherein the LPL receptor is selected from the group consisting of S1P1, S1P2, and S1P3.

120. (New) A method according to claim 63 wherein the agonist is S1P.

121. (New) A method according to claim 63 wherein the agonist is dihydro S1P.

122. (New) A method according to claim 65 wherein the tyrosine kinase receptor is PDGFR-α or PDGFR-β.

123. (New) A method according to claim 65 wherein the ligand is a PDGF.

124. (New) A method according to claim 123 wherein the PDGF is PDGFaa, PDGFab or PDGFbb.

125. (New) A method according to claim 63 wherein the stem cell is co-incubated with an agent selected from the group consisting of TNF alpha, NGF (nerve growth factor), a muscarinic acetylcholine agonist, a serum and a phorbol ester.

126. (New) A method according to claim 63 wherein the stem cell is a hES cell.